

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US2004/021265

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-13
	No: Claims	
Inventive step (IS)	Yes: Claims	1-13
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- Closest prior art:** The document JP-A-10-096463 is regarded as being the closest prior art to the subject-matter of claims 1 and 10, and discloses in figure 1: a transmission for a wind turbine comprising a helical gear (8) on the shaft and meshing with another helical gear (7) such that torque applied to the gears imparts a thrust load to the shaft depending on the direction of rotation and a first bearing (19) supporting the shaft in the housing and being capable of transferring radial loads between the shaft and the housing and a second bearing (22) supporting the shaft in the housing and being capable of transferring both radial loads and thrust loads in both axial directions between the shaft and the housing.
- Problem:** The two single row tapered roller bearings must be carefully adjusted at assembly.
- Solution:** By replacing the two single row tapered roller bearings with a single row tapered bearing with a small rib and a large rib.
- Inventive step:** This solution is not known from nor is it rendered obvious by any available prior art document. Although such a bearing as such is known from the Timken products catalog, this bearing is only known for small diameters and therefore not suitable for bearing thrust load in wind turbine transmissions. The independent claims 1 and 10 and dependent claims 2-9 and 11-13 therefore meet the requirements of Articles 33(2) and 33(3) PCT.